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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/756,925 01/09/01 QUELLET

C 12846/121488

EXAMINER

HM22/0829

MARK E. WADDELL, ESQ.  
BRYAN CAVE LLP  
245 PARK AVENUE  
NEW YORK NY 10167-0034

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ART UNIT	PAPER NUMBER

1619  
DATE MAILED:3  
08/29/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

**Office Action Summary**

Application No.

09/756,925

Applicant(s)

QUELLET ET AL.

Examiner

Gina C Yu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 May 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 11, and 25 are rejected because the term "very fine", which is a term of degree, renders the claims vague and indefinite. The specification provides no standard for measuring the degree of that term, and thus the scope of the claims is not clear.

The remaining claims are rejected as depending on indefinite base claims.

Claim 9 is objected to because of typographical error in the tem "acaricide".

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

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were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over van Lengerich (U.S. Pat. No. 6,190,591 B1) in view of Saleeb et al. (Dev. Food. Sci., 1992) and Bilbrey (U.S. Pat. No. 5,290,547).

Van Lengerich teach controlled release particles which contain an encapsulated or embedded biologically or nutritionally or pharmaceutically active components in a plasticizable matrix, produced in a continuous process. See col. 4, line 14 – col. 6, line 64. Although the reference refers the matrix material in the invention as hydrophobic as in col. 4, lines 14 – 18, whereas the instant claims require “hydrophilic” matrix polymers, examiner views that instant claims are still met since both reference and the instant application disclose identical matrix materials including starch, modified starch, and polyvinyl alcohol, which meets claim 18. See col. 7, lines 54 - col. 18, line 17. The actives that may be encapsulated or embedded in the matrixes are disclosed in col. 9, line 19 – col. 13, line 61, which include flavors, fragrance, biological actives including biocides. Thus claims 6-9, 26 and 27 are met. The amount of actives to be delivered is disclosed in col. 13, lines 50 – 61, meeting claims 4 and 5. The method to coat the actives with film-forming components including emulsifiers in order to prevent the unwanted interaction of the actives and the matrix is disclosed. See col. 13, line 62 –

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col. 14, line 24. The extrusion process of instant claims 11 - 13, and 17-19 is disclosed in and met by Fig. 2; col. 14, line 25 – co. 22, line 24. The starch content of matrix is at least 40 % by weight, or from 60-95 % by weight, which meets instant claim 14. See col. 8, lines 12 – 17. Although the reference contains general teaching that liquid active components in the form of emulsions may be injected, it fails to teach the specific types and components of the emulsion as required by the instant claims.

Saleeb et al. teach method of encapsulating volatile oils or flavor ingredients in the form of fine emulsion droplets (1-50 microns in size) by continuous extrusion process. See abstract; p. 652, line 27 – p. 658, line 31. The reference teaches that the emulsifiers are chosen depending on their optimal HLB for particular oils are chosen to assure the fine dispersion on the matrix. See p. 658, line 35 – p. 659, line 12. The reference teaches that using extrusion for flavor encapsulation reduces and/or eliminates oxidation, loss of oil and extend shelf life. See p. 660, line 3 – p. 661, line 8. Examiner takes the position that the reference implicitly teaches that these emulsion droplets are in the form of oil-in-water emulsion. The reference lacks the teaching of the specific emulsifiers and surfactants of the instant claims.

Bilbrey teaches method to coat the oil-in-water emulsion droplets of fragrance oil for the use odor masking products. See abstract; col. 2, line 55 – col. 5, line 55. The reference teaches that the active is easily applied to a substrate and efficiently activated by moisture or mechanical action in use. See col. 1, line 62 – col. 2, line 55. The size of the droplets is in the range of 2-300  $\mu\text{m}$ . See col. 3, lines 10 – 26. Adding dextrin or polyvinyl alcohol, and sodium lauryl sulphate, sorbitan tristearate, sorbitan trioleate or

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sorbitan monooleate for surfactants is disclosed in col. 4, lines 54 – 65, which meets claims 20-22. The amount of actives, water, surfactant, and additives in microemulsion is disclosed in col. 4, meeting instant claim 15. For claim 16, examiner views that one skilled in the art would have discovered optimum workable weight range by routine experiments.

Given general teaching of van Lengerich of encapsulation of controlled release particles, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have looked to the prior art for specific teaching of making the inclusions in the form of oil-in-water microemulsion, as taught by Saleeb et al. and Bilbrey, because of the expectation to have successfully produced stable composite materials which releases hydrophobic liquid actives with reduced loss due to oxidation and extended shelf-life. It would also have been obvious to one skilled in the art to have chosen the emulsifiers and surfactants and optimized the HLB to obtain the fine dispersion of the droplets in the matrix, as taught by Saleeb et al.

### ***Conclusion***

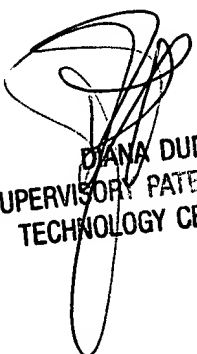
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Barnes et al. (U.S. Pat. No. 4,689,235).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gina C Yu whose telephone number is 703-305-3593. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diana Dudash can be reached on 703-308-2328. Any inquiry of a general

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nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1234.

Gina C. Yu  
Patent Examiner  
August 27, 2001



DIANA DUDASH  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1600